

Modified Completion Report Monitoring

Preliminary Analysis – June 10, 2004



Modified Completion Report Monitoring

- Sample size is 12.5% of THPs undergoing Completion Report field inspections.
- Use CDF's Forest Practice Inspectors to collect the monitoring data.

Modified Completion Report Monitoring

- Water and Lake Protection Zones (WLPZs)
 - WLPZ Percent Canopy (total canopy)
 - WLPZ Erosion Features
- Roads
- Watercourse Crossings

Modified Completion Report Monitoring

http://

www.bof.fire.ca.gov/board/msg_archives

MCR Methods and Procedures, as well as this
this Presentation, are available on-line at the
Monitoring Study Group's archived document
page.

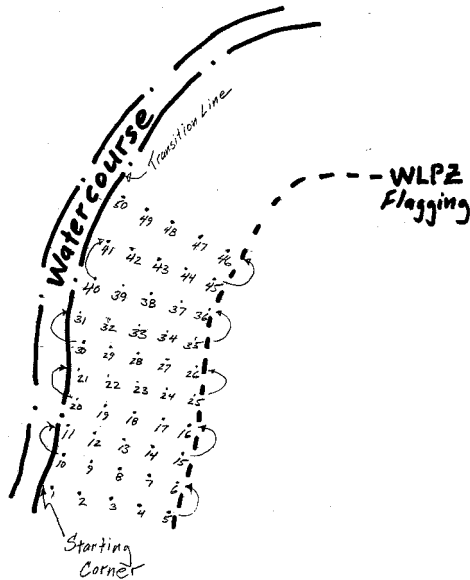
Modified Completion Report Monitoring Percent WLPZ Canopy

To date, 264 THPs sampled, 190 with WLPZs.



Modified Completion Report Monitoring Percent WLPZ Canopy

- Randomly located 200 ft WLPZ segments.
- A 50 point grid pattern and a sighting tube are used for measurement.



Class I WLPZ percent canopy

(thru June 1, 2004)

	Overall	No Harvest	Harvest	
Coast (Region I)	83% n=31	84% n=15	80% n=16	
Inland (Regions 2&4)	70% n=28	69% n=6	70% n=22	

Class II WLPZ percent canopy

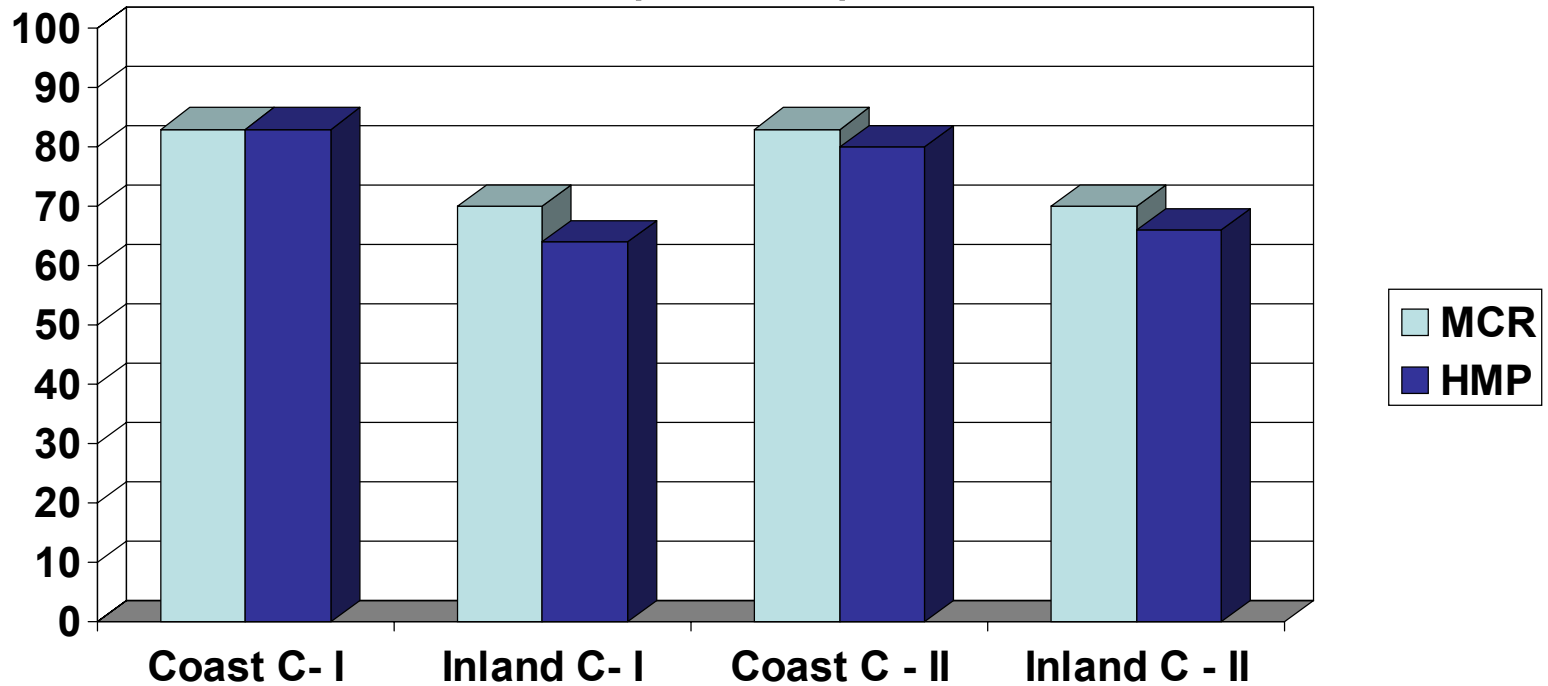
(thru June 1, 2004)

	Overall	No Harvest	Harvest	
Coast (Region I)	83% n=82	85% n=37	80% n=45	
Inland (Regions 2&4)	70% n=49	72% n=24	69% n=25	

Comparing Monitoring Program Results

% WLPZ Canopy

MCR vs. Hillslope Monitoring Program (HMP)



Comparing Monitoring Program Results

Class I WLPZs MCR vs. HMP

	MCR Monitoring Class I WLPZ percent canopy	HMP (1999-2001) Class I WLPZ percent canopy	
Coast (Region I)	83% n=31	83% n=27	
Inland (Regions 2&4)	70% n=28	64% n=30	

Comparing Monitoring Program Results

Class II WLPZs MCR vs. HMP

	MCR Monitoring Class II WLPZ percent canopy	HMP (1999-2001) Class II WLPZ percent canopy	
Coast (Region I)	83% n=82	80% n=114	
Inland (Regions 2&4)	70% n=49	66% n=67	

WLPZ

Erosion Features

- Of 190 WLPZs sampled, 19 WLPZs (10%) had one or more erosion features.
- Of the 19 WPLZs with erosion features, only 2 WLPZs (1%) had erosion features related to current timber operations.

WLPZ Erosion Features Related to Current THP

- 1 with sediment deposition from landing
- 1 with gully (<60% groundcover)

WLPZ Erosion Features

Not Related to Current Operations

- 6 related to inner gorges
- 2 related to streambank failures
- 1 sediment deposition from a scarp
- 4 related to old skid trails/roads
- 1 gully originating at county road
- 1 related to an eroding cow trail
- 1 related to a breached irrigation ditch

Interesting Sidelight

T&I Rules and THP Layout

- Only 6% of pre-2000 THPs designed without WLPZs, Region I. (n=78)
- T&I went into effective in 2000 mid-year.
- 27% of post-2000 THPS designed in such a way that WLPZs were not needed. (n=26)

Modified Completion Report Monitoring Roads



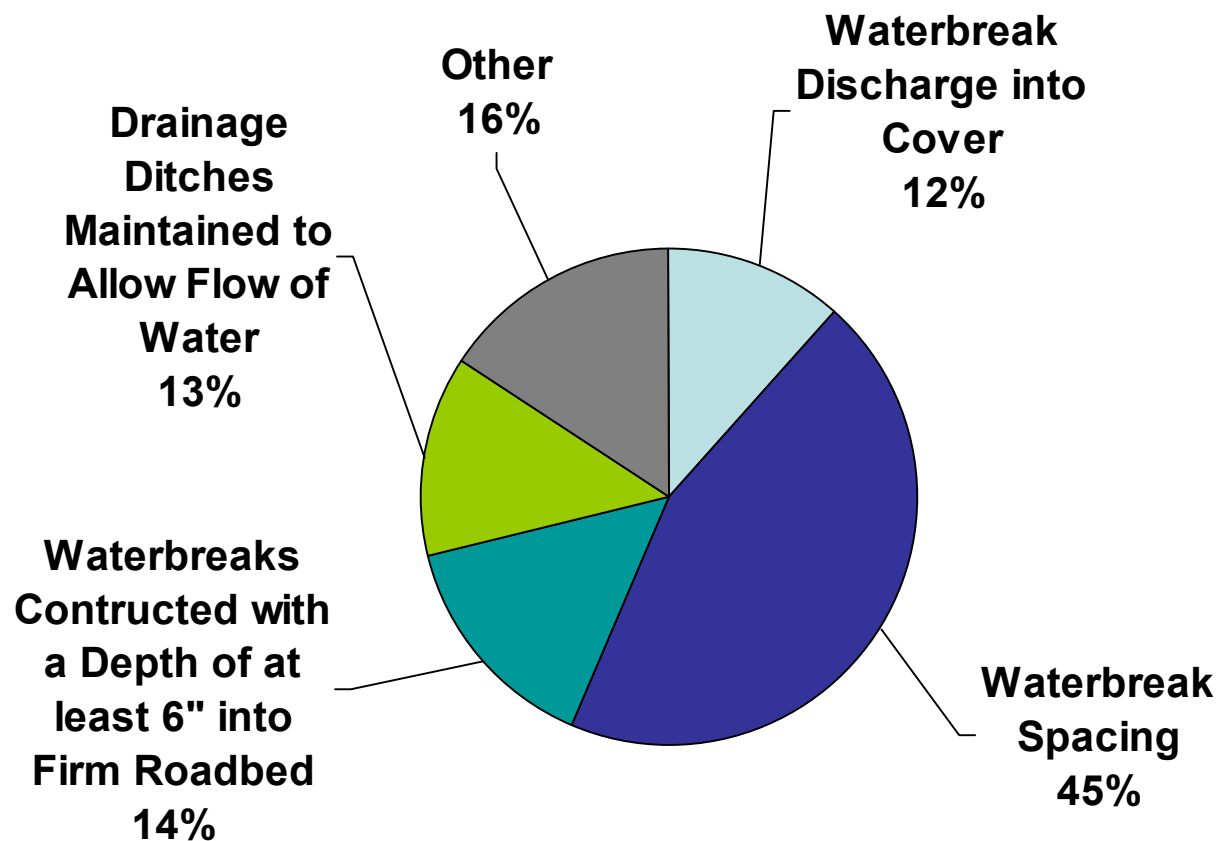
- To date, 226 randomly-selected, one-thousand foot road segments sampled.
(226,000 feet is about 43 miles)
- 16% of these road segments had at least one departure from the Forest Practice Rules (FPRs).

Modified Completion Report Monitoring Roads

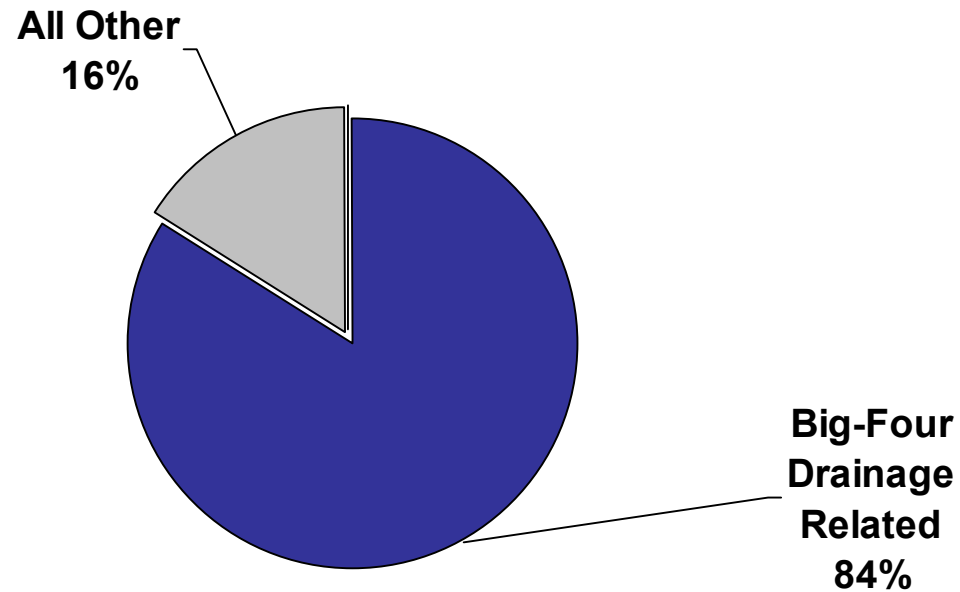


- 67 departures total or about 1.6 departures per mile of road.
- Departures exhibit a pattern.
- In a word it's "drainage."

Road-related Departures from FPRs



Drainage, Drainage, Drainage



Road-related Departures from FPRs

- Out a total of 67 road-related departures from the Forest Practice Rules observed in 226 thousand-foot sample segments (~43 miles), 44 departures have already had the effectiveness inspections completed.
- Out of these 44 road-related departures, 13 departures or about 30% resulted in sediment transport to a watercourse.

Modified Completion Report Monitoring Watercourse Crossings



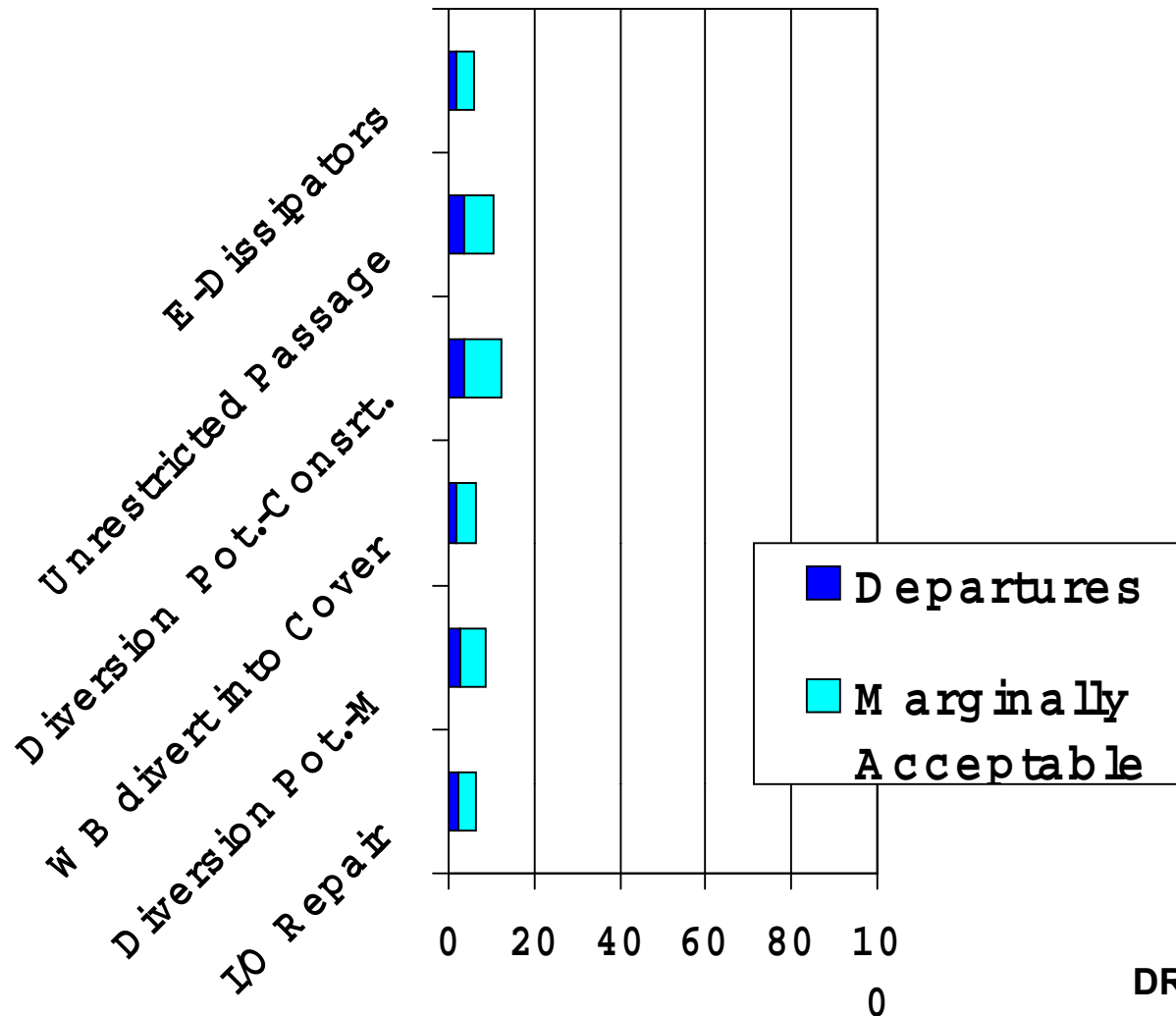
- To date, 328 watercourse crossings sampled, including 223 culverts, 101 fords/dips, and 4 bridges.
- FPR departure and marginally-acceptable occurrence rates are low, averaging 53 occurrences per 100 watercourse crossings, overall.

Top Six FPR Departures & MAs for Existing Crossings

- 923.2(o) No discharge onto erodible fills unless energy dissipators used
- 923.4(d) Xing open to unrestricted passage of water.
- 923.3(f) Xing/fills built/maintained to prevent diversion.
- 923.4(c) Waterbreaks maintained (to divert into cover).
- 923.4(n) Xing/approaches maintained to avoid diversion.
- 923.4(m) Inlet/outlet, etc, repaired /replace as needed.

Top Six by Percentage for Existing Xings

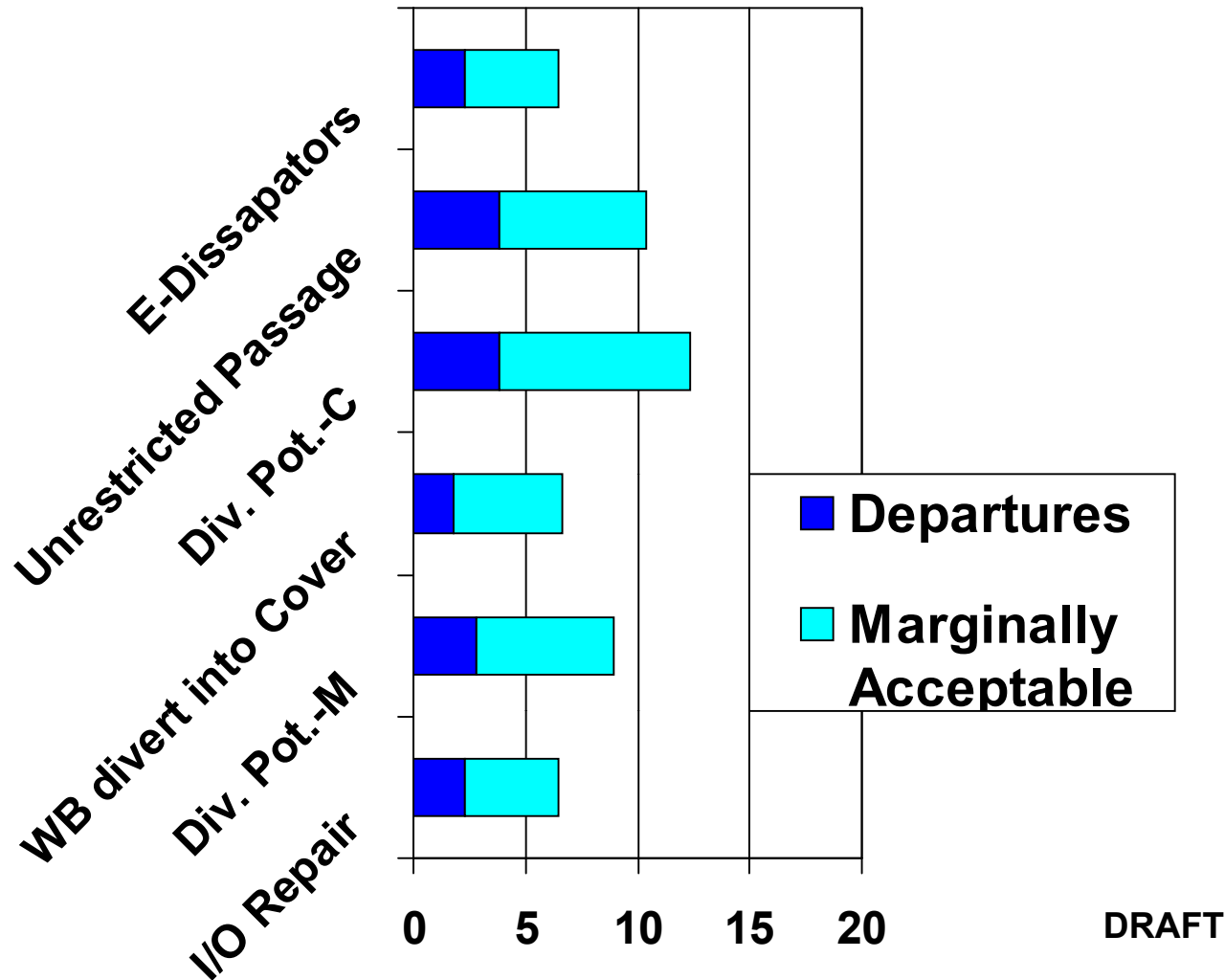
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Top Six by Percentage for Existing Xings

(Same info as previous slide with 0 to 100% scale enlarged to 0 to 20% scale.)

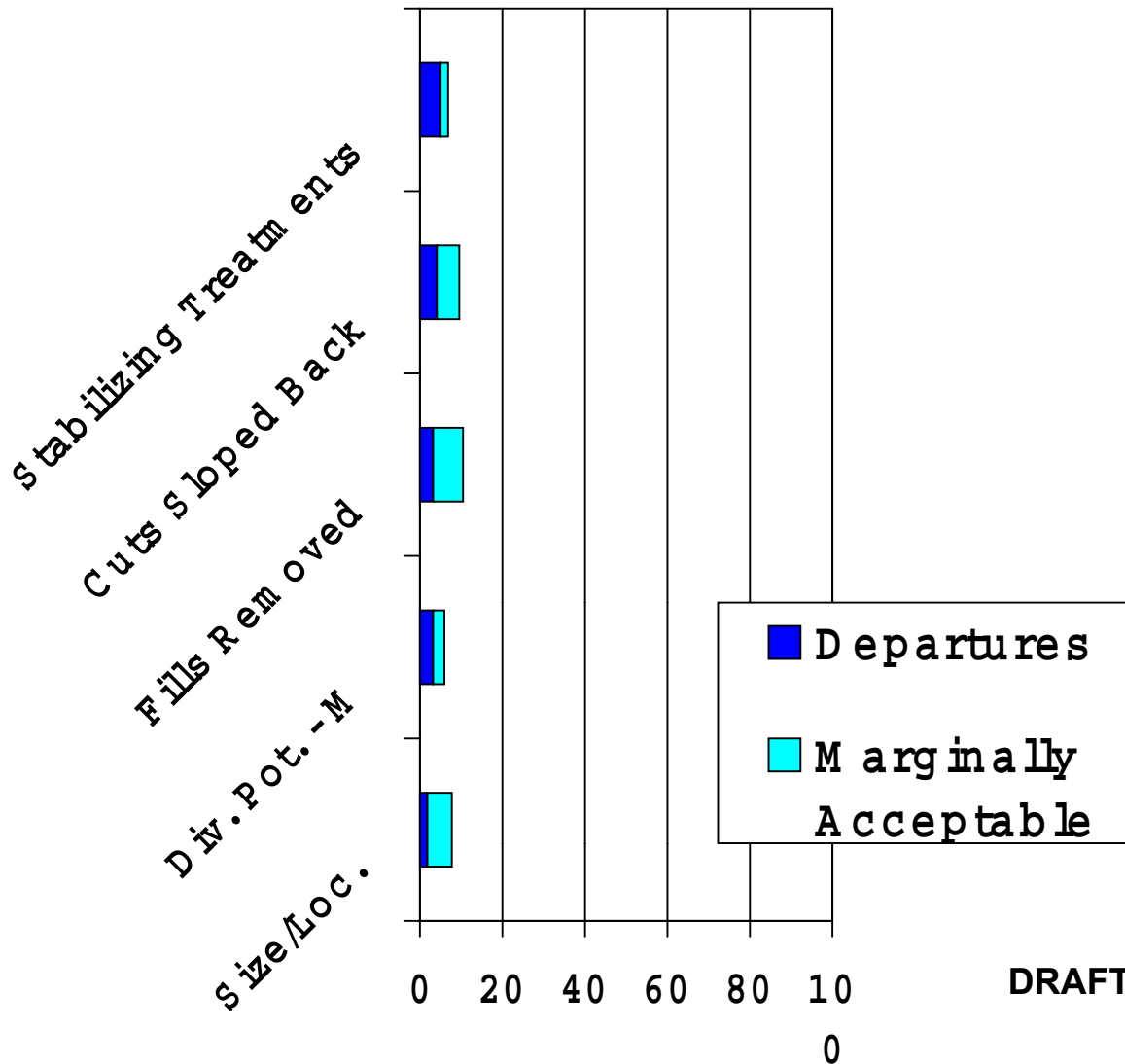


Top Five FPR Departures & MAs for New Crossings

- 923.3(d)(2) Removed Xings-- Where needed, stabilizing treatment applied.
- 923.3(d)(2) Removed Xings--Cut banks sloped banks sloped back to stop slumping.
- 923.3(d)(1) Removed Xings--Fills excavated to reform channels
- 923.4(n) Xing/approaches maintained to avoid diversion.
- 923.2(h) Size, #, location of structures okay to carry runoff.

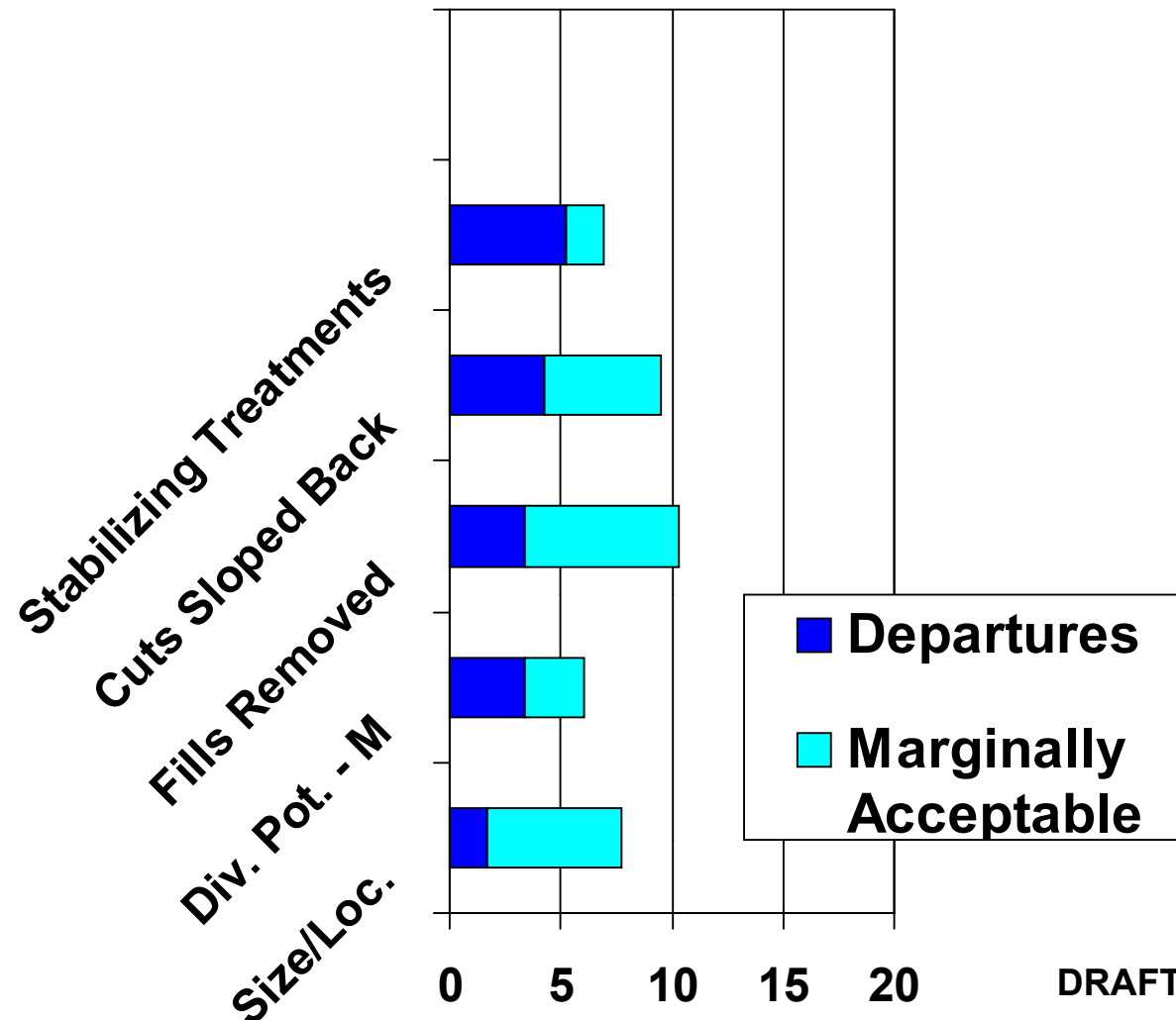
Top Five by Percentage for New Xings

(Horizontal Scale is 0 to 100%.)



Top Five by Percentage for New Xings

(Same info as previous slide with 0 to 100% scale enlarged to 0 to 20% scale.)



Watercourse Crossing FPR departure rates are lower for MCR than for HMP.



This may be due to:

- Fewer overwintering periods;
- Differences in monitoring forms, rating categories, and reviewer opinions; and
- Requirement that major problems be fixed prior to plan completion report approval.

Modified Completion Report Monitoring

Summary of Key Points

- Class I and II WLPZ total canopy exceeds 80% in the Coast Forest Practice District.
- 16% of the road segments had at least one departure from the Forest Practice Rules (FPRs), mostly related to drainage.
- Overall for watercourse crossings, FPR departure and marginally-acceptable occurrence rates are low, averaging 53 occurrences per 100 watercourse crossings.

Modified Completion Report Monitoring

- Due to budget uncertainties, many Forest Practice Inspectors accepted jobs in Fire Protection.
- Out of 72 inspectors, 36 inspectors (50%) accepted Fire Protection positions and are committed to stay through at least this fire season.
- The 50% reduction in inspectors greatly reduces the amount of time the remaining inspectors can commit to collecting MCR data.
- This will impact our effort to collect a complete random sample, which is necessary to ensure valid results.
- As a consequence CDF will suspend MCR monitoring on THPs completed after July 1, 2004.

Modified Completion Report Monitoring

- During the suspension CDF will:
- **Improve completeness of the random sample** by continuing to pursue collection of MCR data on the few randomly selected THPS that were missed during 2003 and the first half of 2004, based on information from the FPS database.
- **Write a report on MCR results** to date and post it on the BOF's Monitoring Study Group (MSG) webpage.
- **Redesign and refocus data collection** based on what we've learned from the Modified Completion Report Monitoring Program and the Hillslope Monitoring Program, and input from sister agencies working on the Non-point Source Monitoring Program.

---End of Presentation---

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Contact Clay Brandow regarding questions
about MCR at clay.brandow@fire.ca.gov